



# Release Notes

Amster 5

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## Abstract

Notes covering new features, fixes and known issues for the ForgeRock® Access Management command-line interface, Amster.



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# Preface

Amster is a lightweight command-line interface, ideal for use in DevOps processes such as continuous integration and deployment.

Read these release notes before you install Amster. The information contained in these release notes cover prerequisites for installation, known issues and improvements to the software, changes and deprecated functionality, and other important information.

## About ForgeRock Identity Platform™ Software

ForgeRock Identity Platform™ is the only offering for access management, identity management, user-managed access, directory services, and an identity gateway, designed and built as a single, unified platform.

The platform includes the following components that extend what is available in open source projects to provide fully featured, enterprise-ready software:

- ForgeRock Access Management (AM)
- ForgeRock Identity Management (IDM)
- ForgeRock Directory Services (DS)
- ForgeRock Identity Gateway (IG)
- ForgeRock Identity Message Broker (IMB)

## Chapter 1

# What's New

This chapter covers the new features and improvements done in Amster 5.

## 1.1. New Features in Amster 5

Amster 5 is the first release, and includes the following features:

- **Scripted, Deterministic Deployments.** Script AM deployments by using the Groovy scripting support within Amster.

See Section 3.5, "Scripting" in the *User Guide*.

- **Import and Export Configuration.** Amster can export all the configuration settings related to an AM instance and import it back to the same or a different instance.

See Section 3.2, "Exporting Configuration Data" in the *User Guide*.

- **Configuration Stored in JSON.** Amster exports all configuration settings as a hierarchy of JSON format text files on the local filesystem. Store these files in a version control system to manage and maintain AM configurations.

See Chapter 1, "Introducing the Amster Command-line Interface" in the *User Guide*.

- **Encryption of Sensitive Data.** Amster can export encrypted password and sensitive data to the configuration files. Amster is not able to decrypt the values itself, only a correctly configured AM instance with the appropriate transport key installed is able to decrypt the values.

See Section 3.1, "Creating Transport Keys" in the *User Guide*.

## Chapter 2

# Before You Install

This section covers software and hardware prerequisites for installing and running Amster.

*ForgeRock supports customers using the versions specified here. Other versions and alternative environments might work as well. When opening a support ticket for an issue, however, make sure you can also reproduce the problem on a combination covered here.*

## 2.1. Operating System Requirements

ForgeRock supports customers using ForgeRock Access Management server software on the following operating system versions:

*Table 2.1. Supported Operating Systems*

Operating System	Version
Red Hat Enterprise Linux, Centos, Amazon Linux	6, 7
Amazon Linux	Amazon Linux 2016.09
SuSE	11
Ubuntu	14.04 LTS, 16.04 LTS
Solaris x64	10, 11
Solaris Sparc	10, 11
Windows Server	2012, 2012 R2, 2016

## 2.2. Java Requirements

*Table 2.2. JDK Requirements*

Vendor	Version
Oracle JDK	7, 8
IBM SDK, Java Technology Edition (Websphere only)	7
OpenJDK	8

**Important**

Support for Oracle JDK 7 and IBM SDK 7 will be removed in a future version.

## 2.3. Special Requests

If you have a special request regarding support for a combination not listed here, contact ForgeRock at [info@forgerock.com](mailto:info@forgerock.com).

## Chapter 3

# Limitations and Known Issues

## 3.1. Limitations

The following important issues remained open when Amster 5 became available:

- **Amster Imports and Exports Configuration From Access Management 5 or Newer**

Upgrade to Access Management 5 or newer to import or export the configuration using Amster.

For more information on upgrades, see the [Upgrade Guide](#).

- **Amster Installs Single-server Instances of Access Management**

To create instances and add them to a multi-server site deployment, see the [Install Guide](#).

- **Importing Resources Containing Slash Characters Can Fail**

Some Access Management resources have names that can contain slash characters (/), for example policy names, application names, and SAML v2.0 entities. These slash characters can cause unexpected behavior and failures in Amster when importing into Access Management instances running on Apache Tomcat.

To workaroud this issue, configure Apache Tomcat to allow encoded slash characters by updating the `CATALINA_OPTS` environment variable. For example:

On Unix/Linux systems:

```
$ export CATALINA_OPTS= \  
"-Dorg.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH=true"  
$ startup.sh
```

On Windows systems:

```
C:\> set CATALINA_OPTS= ^  
"-Dorg.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH=true"  
C:\> startup.bat
```

### Warning

It is strongly recommended that you do *not* enable `org.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH` when running AM in production as it introduces a security risk on Apache Tomcat.



For more information, see [How do I safely enable the org.apache.tomcat.util.buf.UDecoder.ALLOW\\_ENCODED\\_SLASH setting in AM/OpenAM \(All Versions\)?](#) in the *ForgeRock Knowledge Base*.

- **[INFO] Messages Showing On SuSE On Amster Start Up**

Running Amster on SuSE may produce **[INFO]** messages, for example:

```
# ./amster
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
[INFO] Unable to bind key for unsupported operation: up-history
[INFO] Unable to bind key for unsupported operation: down-history
OpenAM Shell (14.0.0 build c9ca9450a9, JVM: 1.8.0_65)
Type ':help' or ':h' for help
.
-----
am>
```

These messages are caused by the keyboard mappings configured in the `/etc/inputrc` file and can safely be ignored, as they do not affect functionality.

- **Private Key Connections to Access Management Can Fail**

Installing or upgrading AM appends the contents of the `/path/to/openam/amster_rsa.pub` file to the `/path/to/openam/authorized_keys` file. The contents of the `authorized_keys` file resemble the following:

```
from="127.0.0.0/24,::1" ssh-rsa AAAAB3NzaC1y...
```

The `from` attribute restricts the communication between AM and Amster clients that communicate using the `127.0.0.0/24` network. If your AM server is not configured in the loopback interface, Amster connections may fail with an error resembling the following:

```
am> connect --private-key /home/fr/openam/amster_rsa https://openam.example.com:8443/openam
Unexpected response from OpenAM
[code:401, reason:Unauthorized, message:Authentication Failed]
```

To work around this problem, remove or update the `from` attribute to suit your environment as follows:

- Remove the `from` attribute, leaving only the key. For example:

```
ssh-rsa AAAAB3NzaC1y...
```

In this example, the Amster client holding the appropriate private key can communicate with AM regardless of their IP address or DNS domain.

- Update the loopback network specified in the `from` attribute with the DNS domain configured for AM. For example:

```
$ cat /etc/hosts | grep -i openam
192.168.1.94 openam.example.com

$ vi /path/to/openam/authorized_keys
from="*.example.com" ssh-rsa AAAAB3NzaC1y...
```

In this example, the Amster client holding the appropriate private key can communicate with AM if they are part of the `.example.com` DNS domain.

Refer to the Linux documentation for more information about patterns supported by the `from` attribute.

## 3.2. Known Issues

### 3.2.1. Known Issues in Amster 5

The following important issues remained open when Amster 5 became available:

- OPENAM-10664: Amster does not support configuration of an external user store
- OPENAM-10667: Amster should be able to add second instance of AM to existing one
- OPENAM-10735: Amster script does not work on Solaris SPARC 10
- OPENAM-10920: Amster: Multiple " Unhandled server error: [Status: 501 Not Implemented]" for `--listPasswords`

## Chapter 4

# Documentation Updates

The following table tracks changes to the documentation set following the release of Amster 5:

*Table 4.1. Documentation Change Log*

Date	Description
2018-06-04	Added a warning admonition about enabling <code>-Dorg.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH</code> in production. For more information, see Section 3.1, "Limitations".
2018-01-09	Added a brief paragraph on how to pass variables into an Amster script. See Section 3.5, "Scripting" in the <i>User Guide</i>
2018-01-04	Added a brief paragraph on how to invoke a script directly in Amster. See Section 3.5, "Scripting" in the <i>User Guide</i>
2017-10-25	Initial release
2017-09-29	Added documentation about starting the <b>amster</b> command in debug with the <code>-d</code> flag. For more information, see Section 2.3, "First Steps" in the <i>User Guide</i> .
2017-10-03	Added a limitation to the Release Notes related to private key connections to AM. For more information, see Section 3.1, "Limitations".

# Appendix A. Getting Support

For more information or resources about OpenAM and ForgeRock Support, see the following sections:

## A.1. Accessing Documentation Online

ForgeRock publishes comprehensive documentation online:

- The ForgeRock Knowledge Base offers a large and increasing number of up-to-date, practical articles that help you deploy and manage ForgeRock software.

While many articles are visible to community members, ForgeRock customers have access to much more, including advanced information for customers using ForgeRock software in a mission-critical capacity.

- ForgeRock product documentation, such as this document, aims to be technically accurate and complete with respect to the software documented. It is visible to everyone and covers all product features and examples of how to use them.

## A.2. Using the ForgeRock.org Site

The [ForgeRock.org](https://forgerock.org) site has links to source code for ForgeRock open source software, as well as links to the ForgeRock forums and technical blogs.

If you are a *ForgeRock customer*, raise a support ticket instead of using the forums. ForgeRock support professionals will get in touch to help you.

## A.3. Getting Support and Contacting ForgeRock

ForgeRock provides support services, professional services, classes through ForgeRock University, and partner services to assist you in setting up and maintaining your deployments. For a general overview of these services, see <https://www.forgerock.com>.

ForgeRock has staff members around the globe who support our international customers and partners. For details, visit <https://www.forgerock.com>, or send an email to ForgeRock at [info@forgerock.com](mailto:info@forgerock.com).